5 CLAIMS

What is claimed is:

1. An oscillator, comprising:

an amplifier having an input and an output;

a feedback network connected between the input of the amplifier and the output of the amplifier, the feedback network being configured to provide suitable positive feedback from the output of the amplifier to the input of the amplifier to initiate and sustain an oscillating condition; and

a tuning circuit connected to the input of the amplifier, wherein the tuning circuit is continuously variable and consists of solid state electrical components with no mechanically adjustable devices including a pair of diodes connected to each other at their respective cathodes with a control voltage connected at the junction of the diodes.

2. An oscillator, comprising:

an amplifier having an input and an output;

a feedback network connected between the input of the amplifier and the output of the amplifier, the feedback network being configured to provide suitable positive feedback from the output of the amplifier to the input of the amplifier to initiate and sustain an oscillating condition; and

transmission lines connected to the input of the amplifier with an input pad and a perpendicular transmission line extending from the input pad and forming a leg of a resonant "T", and wherein the feedback network is coupled to the leg of the resonant "T".